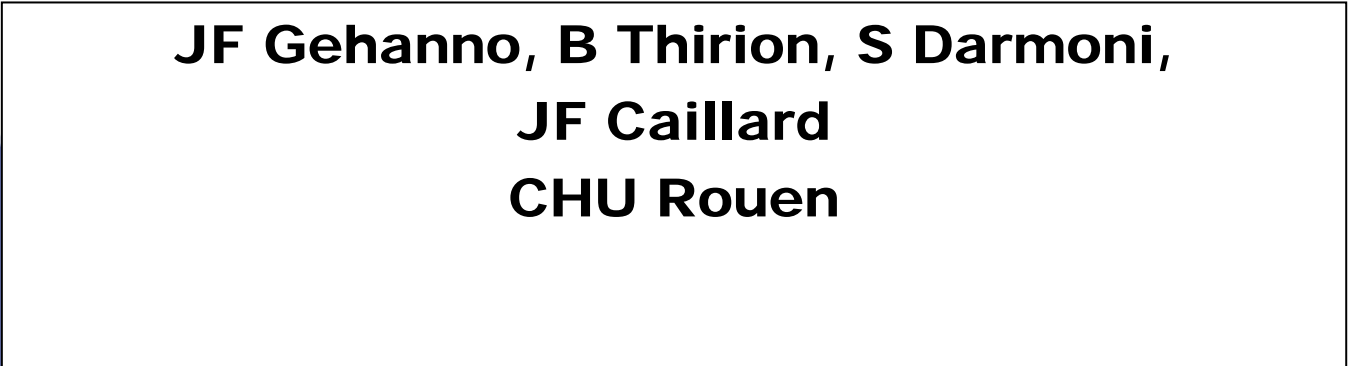


# La recherche documentaire sur le risque cancérogène par le médecin du travail

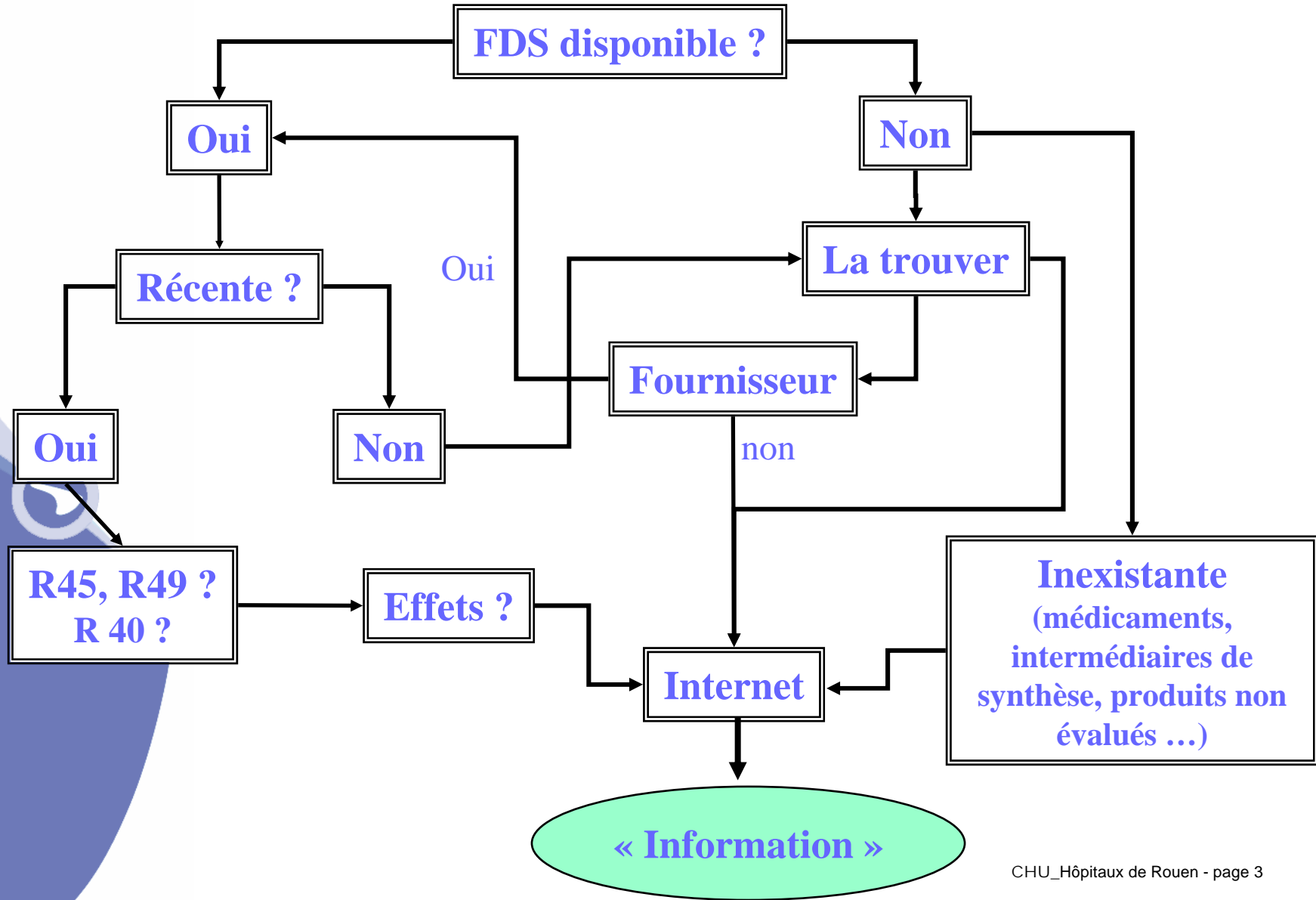


JF Gehanno, B Thirion, S Darmoni,  
JF Caillard  
CHU Rouen

# Plan

- ④ Objectifs de la recherche d'information
  - Dangers
    - ▶ Recenser puis trouver les FDS
    - ▶ Déterminer les organes cibles (effets)
  - Expositions
  - Modalités de la surveillance médicale
  - Gestion des risques
    - ▶ Information
    - ▶ Substitution
    - ▶ EPI

# Dangers des substances



# Trouver des FDS

## 🕒 Sites des fabricants :

- Directs
- Via google

## 🕒 Sites spécialisés :

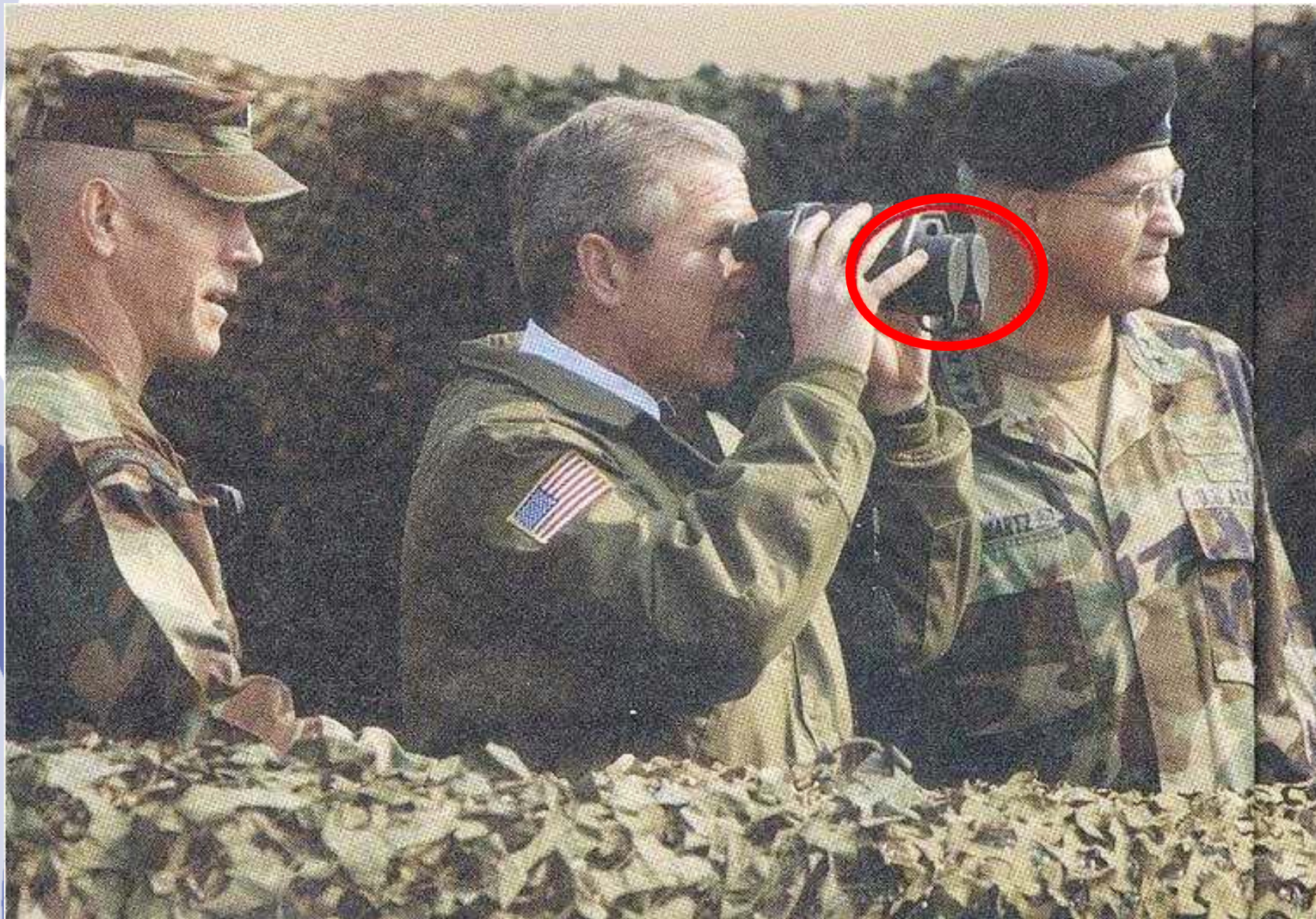
- Extraits des FDS dans FORSAPRE
- <http://www.uvmt.org>
- <http://www.ilpi.com/msds/index.html>

## 🕒 Google

- Nom de commercialisation
  - « produit » AND « MSDS »
- N° CAS



Attention à la qualité des informations recueillies :  
gardez les yeux ouverts



# Classification des substances

## ④ INRS

- ND 2168

- ▶ [www.inrs.fr](http://www.inrs.fr)

## ④ UE

- Adaptations au progrès technique actualisant la directive 67/548

<http://ecb.jrc.it/classification-labelling/>





ECB - CLASSIFICATION AND LABELLING. - Microsoft Internet Explorer

Fichier Edition Affichage Favoris Outils ?

Précédente Recherche Favoris Média OK Liens

Adresse <http://ecb.jrc.it/classification-labelling/>

# Classification & Labelling

HOME DOCUMENTS MEETINGS INFORMATION SEARCH CLASSLAB

**Biocides**  
**Classification & Labelling**  
**Existing Chemicals**  
**Export-Import**  
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**Testing Methods**  
**QSARs**  
**REACH**

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## Search Classlab Database

[Search Annex 1](#)

Annex I of Directive 67/548/EEC contains a list of harmonised classifications and labellings for substances or groups of substances, which are legally binding within the EU.  
The list is regularly updated through Adaptations to Technical Progress. Revised and new classifications inserted to the list are proposed by DG ENV and agreed by a Member State vote.  
The DG ENV proposal is based on advice from the Technical Committee for Classification and Labelling (TC C&L) with participation of experts from the Member States. Their meetings are prepared, chaired and followed-up by the ECB.

[Search Working Database](#)

The working database includes a list of classifications and labellings for one or more endpoints of substances or groups of substances, as agreed in the TC C&L.  
The ECB makes these classifications publicly available for information on the work going on in the TC C&L and also as an indication on changes that most probably will be agreed in the next update of Annex I to Directive 67/548/EEC.  
The classifications in this list is not legally binding but recommended by the TC C&L. It is possible to list the substances that are ready for inclusion in the next Adaptation to Technical Progress.  
It is also possible to list substances discussed in the TC C&L that not lead to any

[http://ecb.jrc.it/classification-labelling/CLASSLAB\\_SEARCH/classlab/search.php](http://ecb.jrc.it/classification-labelling/CLASSLAB_SEARCH/classlab/search.php) Internet

ECB - CLASSIFICATION AND LABELLING. - Microsoft Internet Explorer

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# Classification & Labelling

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**Biocides**

- Classification & Labelling
- Existing Chemicals
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- Testing Methods
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Annex I was latest updated by ATP: 29 - OJ L 152 of 30/04/2004.

|                   |   |
|-------------------|---|
| Language          | FR  |
| Index number      |   |
| EC number         |   |
| CAS number        |   |
| Substance Name    | formaldehyde  |
| Risk Phrases      | 1<br>10<br>11<br>12<br>14<br> To select more than one code, keep the CTRL key |
| Seveso Categories | 0<br>1<br>2<br>3<br>4<br> To select more than one code, keep the CTRL key    |
| ATP               |   |

Search Clear

ECB - CLASSIFICATION LABELLING. Internet



ECB - CLASSIFICATION AND LABELLING. - Microsoft Internet Explorer

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# Classification & Labelling

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|  | Index number                   | Substance Name  | EC number | CAS number | Risk Phrases                         | Seveso Categories  | ATP ( )           |
|--|--------------------------------|---|-----------|------------|--------------------------------------|--|-------------------|
|  | 1 <a href="#">604-035-00-8</a> | <a href="#">4-nonylphenol, reaction products with formaldehyde and dodecane-1-thiol</a>   | 404-160-6 |            | R: <a href="#">43-53</a>             | -  | INS: 20<br>UP:    |
|  | 2 <a href="#">604-067-00-2</a> | <a href="#">A mixture of: 2,2'-[[(2-hydroxyethyl)imino]bis(methylene)bis[4-dodecylphenol], formaldehyde oligomer with 4-dodecyl phenol and 2-aminoethanol(n = 3, 4 and higher), formaldehyde oligomer with 4-dodecyl phenol and 2-aminoethanol(n = 2)</a> | 414-520-4 | -          | R: <a href="#">38-41-50/53</a>       | -  | INS: 29<br>UP: 29 |
|  | 3 <a href="#">605-001-00-5</a> | <a href="#">formaldehyde ...%</a>   | 200-001-8 | 50-00-0    | R: <a href="#">23/24/25-34-40-43</a> | Yes<br>Main: <a href="#">0</a><br>Other: <a href="#">2</a> | INS: 19<br>UP: 22 |
|  | 4 <a href="#">605-021-00-4</a> | <a href="#">Formaldehyde, reaction products with butylphenol</a>  | 294-145-9 | 91673-30-2 | R: <a href="#">43</a>                | -  | INS: 22<br>UP:    |
|  | 5 <a href="#">648-029-00-3</a> | <a href="#">Crude Tar Bases, Pyridine, alkyl derivs., [The complex combination of polyalkylated pyridines derived from coal tar distillation or as high-boiling</a>   | 269-929-9 | 68391-11-7 | R: <a href="#">45</a>                | -  | INS: 21<br>UP:    |

ECB - CLASSIFICATION LABELLING. Internet

# Déterminer des propriétés toxiques

## ⦿ Pourquoi ?

- Pas de classification ...
- Anticiper une évolution réglementaire ...
  - Éthers de glycol, formaldéhyde ...
- Définir une surveillance médicale adaptée

## ⦿ Bases de données factuelles : synthèse déjà faite

- Francophones :
  - INRS, INERIS, CCHST
- Anglophones ... mais résumés en français
  - IARC
  - IPCS
- Anglophones
  - Toxnet (HSDB)
  - ATSDR
    - Toxicological profiles
  - Report on carcinogens


NTP: 11th Report on Carcinogens - Microsoft Internet Explorer

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Précédente Recherche Favoris Média

Adresse <http://ntp.niehs.nih.gov/index.cfm?objectid=32BA9724-F1F6-975E-7FCE50709CB4C932> OK Liens >>

Enter Search Terms search

 **National Toxicology Program**  
Department of Health and Human Services

Home Testing Information Study Results & Research Projects Public Health About the NTP Help



[Home](#) >> [Public Health](#) >> [Report on Carcinogens](#) >> 11th Report on Carcinogens

## 11th Report on Carcinogens [Print Format](#)

U.S. Department of Health and Human Services  
Public Health Service  
National Toxicology Program  
Pursuant to Section 301(b) (4) of the Public Health Service Act as Amended by  
Section 262, PL 95-622

---

Official Citation: Report on Carcinogens, Eleventh Edition; U.S. Department of  
Health and Human Services, Public Health Service, National Toxicology  
Program

**NTP 25th Celebration**

**NTP Vision & Roadmap**

**Provide Input to NTP**

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Terminé Internet

NTP: 11th Report on Carcinogens - Microsoft Internet Explorer

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Adresse <http://ntp.niehs.nih.gov/index.cfm?objectid=32BA9724-F1F6-975E-7FCE50709CB4C932> OK Liens >>

## Table of Contents

- I. Introduction
- II. Carcinogens Listed in the Eleventh Report
  - A. Known to be Human Carcinogens
  - B. Reasonably Anticipated to be Human Carcinogens
- III. Substance Profiles
  - Acetaldehyde
  - 2-Acetylaminofluorene
  - Acrylamide
  - Acrylonitrile
  - Adriamycin® (Doxorubicin Hydrochloride)
  - Aflatoxins
  - Alcoholic Beverage Consumption
  - 2-Aminoanthraquinone
  - o-Aminoazotoluene
  - 4-Aminobiphenyl
  - 1-Amino-2,4-dibromoanthraquinone
  - 1-Amino-2-methylantraquinone
  - Amitrole
  - o-Anisidine Hydrochloride
  - Arsenic Compounds, Inorganic
  - Asbestos
  - Azacitidine

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Internet

# Déterminer des propriétés toxiques - suite

## ④ Synthèse à faire : bases de données bibliographiques

- Medline (Pubmed)
- Toxline (Toxnet)
- Embase ...

## ④ Bases non exhaustives

- (Amiante / mésothéliome) (allergie au latex)
- Interrogation de 5 bases (E, M, T, B, NIOSH-TIC)
  - ▶ 1 base : 11 – 58 % de la littérature
  - ▶ 2 bases : 42 - 86 % de la littérature
  - ▶ 3 bases : 72 - 96 % de la littérature



# Expositions dans des circonstances similaires

- ④ Evaluation a priori
  - Matrices emploi exposition
    - ▶ EVALUTIL
  - Recueils formalisés d'information
    - ▶ FAST, FAN
    - ▶ FORSAPRE
  - Collègues
    - ▶ Localement
    - ▶ National ou international
      - Forums de discussion
      - Google
        - » Attention à la qualité de l'information
- 📖 Bases de données bibliographiques

Entrez PubMed - Microsoft Internet Explorer

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Adresse <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?CMD=Clipboard&DB=pubmed> OK Liens >>

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Related Resources  
Order Documents  
NLM Catalog  
NLM Gateway  
TOXNET  
Consumer Health  
Clinical Alerts  
ClinicalTrials.gov  
PubMed Central

Display Summary Show 20 Sort by Send to

All: 5 Review: 0

Items 1 - 5 of 5 One page.

- 1: [Li GJ, Zhang LL, Lu L, Wu P, Zheng W.](#) Related Articles, Links  
Occupational exposure to welding fume among welders: alterations of manganese, iron, zinc, copper, and lead in body fluids and the oxidative stress status.  
J Occup Environ Med. 2004 Mar;46(3):241-8.  
PMID: 15091287 [PubMed - indexed for MEDLINE]
- 2: [Saito H, Hisanaga N, Okada Y, Hirai S, Arito H.](#) Related Articles, Links  
Thorium-232 exposure during tungsten inert gas arc welding and electrode sharpening.  
Ind Health. 2003 Jul;41(3):273-8.  
PMID: 12916759 [PubMed - indexed for MEDLINE]
- 3: [Gafvert T, Pagels J, Holm E.](#) Related Articles, Links  
Thorium exposure during tungsten inert gas welding with thoriated tungsten electrodes.  
Radiat Prot Dosimetry. 2003;103(4):349-57.  
PMID: 12797558 [PubMed - indexed for MEDLINE]
- 4: [Pfaffli P, Hameila M, Keskinen H, Wirmoila R.](#) Related Articles, Links  
Exposure to cyclic anhydrides in welding: a new allergen-chlorendic anhydride.  
Appl Occup Environ Hyg. 2002 Nov;17(11):765-7.  
PMID: 12419104 [PubMed - indexed for MEDLINE]
- 5: [Matczak W, Gromiec J.](#) Related Articles, Links  
Exhaustion of occupational exposure to toxic metals released in the process of Schweißen

Internet

# Modalités de la surveillance médicale

- ④ Prescriptions réglementaires vs EBM (médecine basée sur les preuves )
  - Surveillance selon effet attendu (type et fréquence)
  - Recommandations de bonnes pratiques
    - ▶ Nationales : Santé publique
      - ANAES (HAS)
      - Francophones : CHU de Rouen
        - » <http://doccismef.chu-rouen.fr>
    - ▶ Internationales
      - OSHA-EU
      - CDC/NIOSH
    - ▶ Mais peu de vraies recommandations concernant la santé au travail
      - Recherche dans la littérature scientifique
        - » Systematic reviews
        - » Problème : millions d'articles scientifiques

# Medline et Médecine factuelle

## ④ Identification des revues systématiques

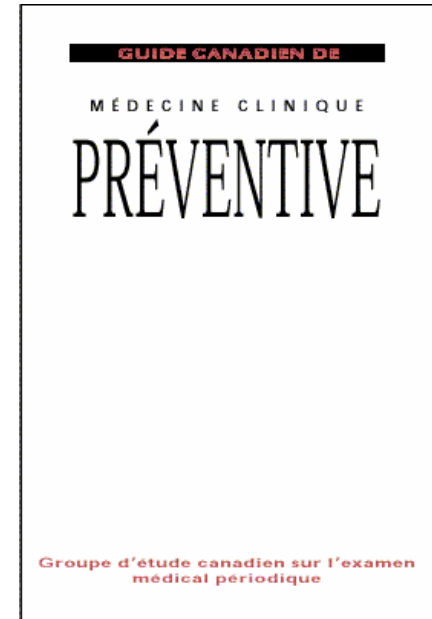
- Etudes sur la sensibilité et la spécificité (bruit de fond) des requêtes
- Hedges Team (Montori et coll. BMJ 2005)
  - ▶ Stratégie la plus sensible (99,9 %) :
    - Search\* [tiab] OR meta-analysis [pt] OR meta-analysis [tiab] OR meta-analysis [mh] OR review [pt] OR diagnosis [sh] OR associated [tiab]
  - ▶ Stratégie la plus spécifique (99,2 %) et la plus précise (57,1 %) :
    - MEDLINE [tiab] OR (systematic [tiab] AND review [tiab]) OR meta-analysis [pt]

## ④ Identification des consensus et recommandations de bonne pratique :

*pain* AND ("guidelines"[MeSH Terms] OR "Consensus Development Conferences"[MeSH Terms] OR "consensus development conference"[Publication Type] OR "consensus development conference, nih"[Publication Type] OR "guideline"[Publication Type] OR "practice guideline"[Publication Type])

# Dépistage cancers population générale

- ④ Notre rôle ?
  - Maintient de la capacité de travail
- ④ Sources :
  - Guide canadien de médecine clinique préventive
  - Medline





# Information des salariés sur le risque cancérogène

- ④ Ils la cherchent sans nous ...
  - Sites personnels, associatifs
  - Ligue contre le cancer
  - Site d'information sur les cancérogènes professionnels (CHU de Rouen)
- ④ Nous aider pour délivrer une information valide, compréhensible, adaptée : supports
  - INRS
  - CCHST
  - NIOSH, NHS : traduction ...

# Conclusion

- ④ Ne pas brûler les livres ...
  - Synthèse de la connaissance
  - Description d'anciennes conditions de travail
  
- ④ Internet : un moyen
  - D'identification des publications scientifiques
  - D'accès à la littérature grise
  - D'échange d'informations
    - ▶ Pour les médecins
    - ▶ Pour les salariés
  
- Vaut l'investissement, même si la recherche s'apparente parfois ...

Une aiguille dans une ...

Bon courage !



## Bibliographie

- ④ Oldershaw P, Fairhurst S. Sharing Toxicological Information on Industrial Chemicals. *Ann Occ Hyg* 2001;45(4):291-4.
- ④ Obadia I. ILO activities in the area of chemical safety. *Toxicology* 2003;190:105-15.
- ④ Schwela D, Hakkinen PJ. Human exposure assessment resources on the World Wide Web. *Toxicology* 2004;198:169-76. *Toxicology* 173 (2002) 75-88
- ④ Russom CL. Mining environmental toxicology information: web Resources. *Toxicology* 2002;173:75-88.
- ④ Greenberg GN. Internet resources for occupational and environmental health professionals. *Toxicology* 2002;178:263-9.